



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,098	11/13/2001	Suk Sang Oh	K-0342	6523

34610 7590 01/24/2008  
KED & ASSOCIATES, LLP  
P.O. Box 221200  
Chantilly, VA 20153-1200

EXAMINER
----------

BARQADLE, YASIN M

ART UNIT	PAPER NUMBER
----------	--------------

2153

MAIL DATE	DELIVERY MODE
-----------	---------------

01/24/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

MN

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/987,098	OH, SUK SANG	
	<b>Examiner</b>	<b>Art Unit</b>	
	Yasin M. Barqadle	2153	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 October 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4,5,7-11,13,15,16,18,19,21-23,25 and 27-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-2,4-5,7-11,13,15-16,18-19,21-23,25,27-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**Continued Examination Under 37 CFR 1.114**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 26, 2007 has been entered.

**Response to Amendment**

2. The amendment filed on October 26, 2007 has been fully considered but are not persuasive.

3. In the interest of expediting prosecution, the Examiner recommends conducting an interview prior to filling a response to the present office action. In this way potential allowable subject matter could be identified and/or issues for appeal.

- Claims 1-2, 4-5, 7-11, 13, 15-16, 18-19, 21-23, 25, and 27-36 are presented for examination.

#### Response to Amendment

4. In essence the Applicant argues in pages 12, first paragraph "Dommetry does not teach or suggest a first foreign agent receiving the packets from the home agent and storing the packets in a first buffer of the first foreign agent in combination with a second foreign agent receiving the packets stored in the first buffer of the first foreign agent from the first foreign agent, and the second foreign agent he received packets in a second buffer of the second foreign agent if said mobile node is moved to a second foreign network from the first foreign network." Examiner notes that the updated information is stored in a first foreign agent where buffering is performed. Dommetry also teaches " For example, any of the routers that handle data transmitted between the sender and the receiver node may also implement buffering and/or retransmission triggering. Preferably, buffering and triggering mechanisms are implemented by the mobile node's home agent. Buffering and/or triggering mechanisms may also be implemented by any foreign agent or the

mobile node itself... The buffering may also be distributed over several nodes or routers. (Col. 5, lines 57 to col. 6, line 24 and figs. 2A-B). Dommety further teaches, "During this communication, the Receiving Mobile Node disconnects from a first router and reconnects to a different router. For example, the Receiving Mobile Node moves from the HA's router to a FA router. By way of another example, the Receiving Mobile Node moves from a First FA to second FA." (Col. 7, lines 8-27). Furthermore, Dommety teaches, " Also, the old address (e.g., foreign agent) may send or be directed to send packets received after the mobile node disconnects from the old address to the new address (e.g., a new foreign agent) of the mobile node. (Col. 11, lines 26-44. See also col. 7, 9-49). Hence, Dommety teaches the limitations as argued.

Applicant also argues "The Office Action also references Dommety's col. 11, lines 26-44. However, the features discussed at this section relates to a different "reference" by Roy Laurens." (page 13, lines 4-5). Examiner notes that Roy's reference has been incorporated in its entirety in Dommet's reference. Also, the section referenced by the examiner is found in Dommety. See col. 11, lines 26-44.

*Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. As per claims 1,5,7, 8-10,15,19, 21-23, and 27-29 are rejected under 35 U.S.C. 102(e) as being anticipate by Dommetty et al U.S. Pat. No. (6,510,144) hereinafter "Dommetty"

As per claim 1, Dommety et al teach a mobile Internet Protocol (IP) system (fig. 1, system 2 and abstract), comprising:

a mobile node (mobile node 6, fig. 1) initially linked to a first foreign network (mobile node is linked to WAN 4, through elements 12 and 14. See fig. 1, FA 10 and R2, col. 1, lines 3-65 and col. 5, lines 57 to col. 6, line 48);

a home agent receiving a set of data packets, which are supposed to be transmitted to said mobile node, said home agent being included in a home network of said mobile node (HA 8, receives data packets destined for mobile node 6. See fig. 1, MN (1) and col. 2, lines 29-57); and

a first foreign agent receiving said packets from said home agent and storing said packets in a first buffer (see the steps in figs. 2A-B and col. 5, lines 57 to col. 6, line 56) of said first foreign agent (FA1), wherein said first foreign agent sends said stored packets to said mobile node if said mobile node continues to be linked to said first foreign network (see fig. 1 packet to MN (2) and col. 2, lines 33-57); and

a second foreign agent receiving said packets stored in said first buffer of said first foreign agent from said first foreign agent, and the second foreign agent storing the received packets in a second buffer of said second foreign agent if said

mobile node is moved to a second foreign network from said first foreign network, the packet stored in the second buffer that are received from the first buffer include packets stored in the first buffer while the mobile node is linked to the first foreign network, said second foreign agent being included in said second foreign network (col. 2, lines 4-48; col. 5, lines 57 to col. 6, line 24; col. 7, 9-49 and col. 11, lines 26-44. see figs 2A-2B).

As per claim 5, Dommetry et al teach the mobile IP system of claim 1, wherein said buffer is coupled to said first foreign agent (col. 5, lines 29-66).

As per claim 7, Dommetry et al as modified teach the mobile IP system of claim 1, wherein said first foreign agent determines whether said mobile node is moved to said second foreign network by checking whether said notification message is received from said mobile node (the receiving mobile node moves from a first FA to a second FA col. 2, lines 1-48; col. 7, 9-40 and col. 11, lines 26-34).

As per claim 8, this is a method claim with similar limitations as claims 1. Therefore, it is rejected with the same rationale.



As per claim 9, Dommetry et al teach the method of claim 8, wherein said first buffer is coupled to said first foreign agent (col. 5, lines 29-66).

As per claim 10, Dommetry et al teach the method of claim 8, wherein said second buffer is coupled to said second foreign agent (Fig. 1 and col. 5, lines 29 to col. 6, line 25).

As per claim 15, Dommetry in view of Watanuki teach the data routing method of a first foreign agent in a mobile Internet Protocol (IP) network, the method comprising the steps of:

receiving a set of data packets and storing them in a buffer (HA 8, receives data packets from FA 10 and Node 18. See fig. 1, MN (2) and col. 5, lines 57 to col. 6, line 48);

determining a mobile node to which said packets are supposed to be transmitted (col. 2, lines 1-48 and col. 5, lines 57 to col. 6, line 48);

storing packets in a first buffer of the first foreign agent in the first foreign network (col. 2, lines 4-48; col. 5, lines 57 to col. 6, line 24;

the first foreign agent sending the stored packets to the mobile node if the mobile node is linked to the first foreign

network (see the steps in figs. 2A-B and col. 5, lines 57 to col. 6, line 56);

determining if said mobile node moves to a second foreign network having a second foreign agent (col. 8, lines 3-58 and col. 9, lines 6-46); and storing the packets in a second buffer of the second foreign agent after the second foreign agent receives the packets and the mobile node has moved from the first foreign network to the second foreign network (col. 2, lines 4-48; col. 7, 9-49 and col. 11, lines 26-44..see figs 2A-2B).

As per claim 19, Dommetty et al teach the method of claim 15, wherein said buffer is coupled to said first foreign agent (col. 5, lines 29-66).

As per claim 21, Dommetty et al in view of Watanuki teach the method of claim 15, wherein said determination step (c) is performed by checking whether said notification message is received from said mobile node (the receiving mobile node moves from a first FA to a second FA col. 2, lines 1-48; col. 7, 9-40 and col. 11, lines 26-44).

As per claim 22, Dommety et al teach the method of claim 20, wherein an IP address of said second foreign agent is indicated in said notification message (col. 2, lines 1-48 and col. 11, lines 26-44).

As per claim 23, these claim includes similar limitation found in claims 1 and 8 above, therefore it is rejected with the same rationale.

As per claim 27, Dommety et al teach the method of claim 23, further comprising:

    sending said packets to a home agent (HA 8, receives data packets from FA 10 and Node 18. See fig. 1, MN (2) and col. 5, lines 57 to col. 6, line 48); and                      sending said packets from said home agent to said first foreign agent (fig. 1 and figs 2A-B col. 3, lines 4-49 col. 5, lines 57 to col. 6, line 56; col. 7, 9-49 and col. 11, lines 26-44).

As per claim 28, Dommety et al teaches the method of claim 1, wherein the home agent comprises a router of the home agent network of the mobile node (Fig. 1, R1)

As per claim 29, Dommety et al teach the method of claim 1, wherein the mobile node further registers to the home agent if

the mobile node is moved to the second foreign network (col. 5, lines 57 to col. 6, line 48. see registration diagram shown in fig.1).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 2,4,11,13,16 18, 25 and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dommetty et al, U.S. Pat. No. (6,510,144) in view of Miller et al U.S. Pat. No. (6247058).

7.

As per claims 2,4,11,13,16,18, 25 and 30, Although Dommetty shows substantial features of the claimed invention, including overwriting old update information with newly received update information, they do not explicitly show deleting stored packets after sending the stored packets

Nonetheless, this feature is well known in the art and would have been an obvious modification of the system disclosed by Dommetry, as evidenced by Miller et al USPN. (6247058).

In analogous art, Miller et al whose invention is about a network device receiving packets from a first network segment, time stamps the packets as they arrive, and transmits the packets to a second network segment. Packets are stored in a buffer memory where they are discarded after certain period of time to make a room for an arriving packet (abstract and col. 8, lines 22-35. See also col. 12, lines 29-37). Giving the teaching of Miller et al, a person of ordinary skill in the art would have readily recognized the desirability and the advantage of modifying Dommetry by employing the system of Miller et al in order conserve network bandwidth and to enhance the efficient use of buffer memory (abstract and col. 12, lines 29-49).

As per claim 31, Dommetry teaches the mobile IP system of claim 30, wherein the notification message includes an IP address of the mobile node, an IP address of the first foreign agent and a care-of-address (COA) of the mobile node (Col. 2, lines 4-48 and col.8, lines 26-37).

As per claim 32, Dommety teaches the mobile IP system of claim 31, where COA represents an IP address of the second foreign agent (Col. 2, lines 4-48 and col.8, lines 26-37).

As per claims 33-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dommety et al U.S. Pat. No. (6,510,144) hereinafter "Dommety" in view of Watanuki et al US Patent Number (6172986), hereinafter "Watanuki ".

As per claim 33 and 35-36, Although Dommety shows substantial features of the claimed invention, Dommety does not explicitly show a mobile node sending a notification message to a foreign agent if a mobile node is moved to another foreign agent.

Nonetheless, this feature is well known in the art and would have been an obvious modification of the system disclosed by Dommety, as evidenced by Watanuki USPN. (6172986).

In analogous art, Watanuki whose invention is about a mobile node moving from a first IP (Internet Protocol) network to a second IP network in a network system. The system includes an IPv4 movement registration processing portion for executing a movement notification processing which notifies the movement of the node to another IPv4 network or to an IPv4/v6 network

(foreign network), discloses, "FIG. 30 shows the data structure of the IPv6 movement registration request message transmitted by the IPv4/v6 mobile node 1806. As shown in the drawing, the IPv6 movement registration request message 3000 includes a IPv6 header 3001 and a IPv6 data 3004. The IPv6 header 3001 includes a foreign IPv6 address 3002 and a home IPv6 address. The IPv6 address of the home IPv6 mobile agent 1807 is set to the home IPv6 address 3002, and the IPv6 address which the IPv4/v6 mobile node 1806 acquires in the visiting network is set to the home IPv6 address 3003. The IPv6 data 3004 includes the IPv6 address 3005 as the IPv6 address of the node itself transmitting this message and the foreign IPv6 address 3006 as the IPv6 address which the mobile node acquires afresh in the visiting network." Col. 24, lines 24-40). Watanuki further teaches, "Incidentally, the IPv4/v6 mobile node 1806 always transmits after its movement the packet to the foreign IPv4 mobile agent 3208 in accordance with the processing procedure of the Mobile IPv4. Therefore, the foreign IPv4 mobile agent 3208 can receive the IPv4 movement registration request message 4200"[col. 9, lines 15-40; Col. 36, lines 65 to col. 37, line 12 and col. 41, lines 5-26]. Giving the teaching of Watanuki, a person of ordinary skill in the art would have readily recognized the desirability and the advantage

of modifying Dommety by employing the system of Watanuki so that the location of the mobile node in the network is known as it move from one network to another.

As per claim 34, Watanuki et al teach the method of claim 33, wherein the (COA) represents IP address of the second foreign agent (col. 24. line 24-40. See figs 30-31 and 42).

#### Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yasin Bargadle whose telephone number is 571-272-3947. The examiner can normally be reached on 9:00 AM to 5:30 PM.

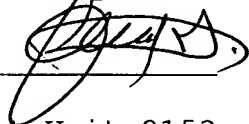
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Burgess can be reached on 571-272-3949. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-746-7238 for After Final communications.



Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either private PAIR or public PAIR system. Status information for unpublished applications is available through private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Y. Bargadle

A handwritten signature in black ink, appearing to be 'Y. Bargadle', written over a horizontal line.

Art Unit 2153